Unit 05 – Data Modelling

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Learning Aim C1 – Developing a Data Model Solution

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C1.4 Importing and Exporting Data

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Learning Objectives

To be able understand what is meant by Importing and Exporting Data.

To be able to import data into a spreadsheet.

To be able to export data from a spreadsheet.

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Before You Start

Make sure that you are familiar with how to write functions.

Make sure that you are able to use the formula bar in excel.

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Importing Data

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What is Data Importing?

All of the spreadsheets you have worked with already contain data.

Sometimes you will need to load a data file into your program.

This is called ***IMPORTING***.

Standard data files for import are called ***CSV*** files – ***Character Separated Value***.

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CSV Files

This is a common way of loading raw data into a data model.

Each row of data is broken up into individual items by a character.

This character will always be the same.

It is usually a comma, which is why these files are sometimes called ***Comma S***eparated ***V***alue files.

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CSV and Data Import

- The idea is that the data model will look for each character.
- It will then ***SPLIT*** or ***PARSE*** the data between each character into a different cell.
- However, all information about the data is lost.
- There are no functions or formulas stored.
- There are no datatypes stored.
- You would need to recreate these yourself by hand.

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What do CSV Files Look Like?

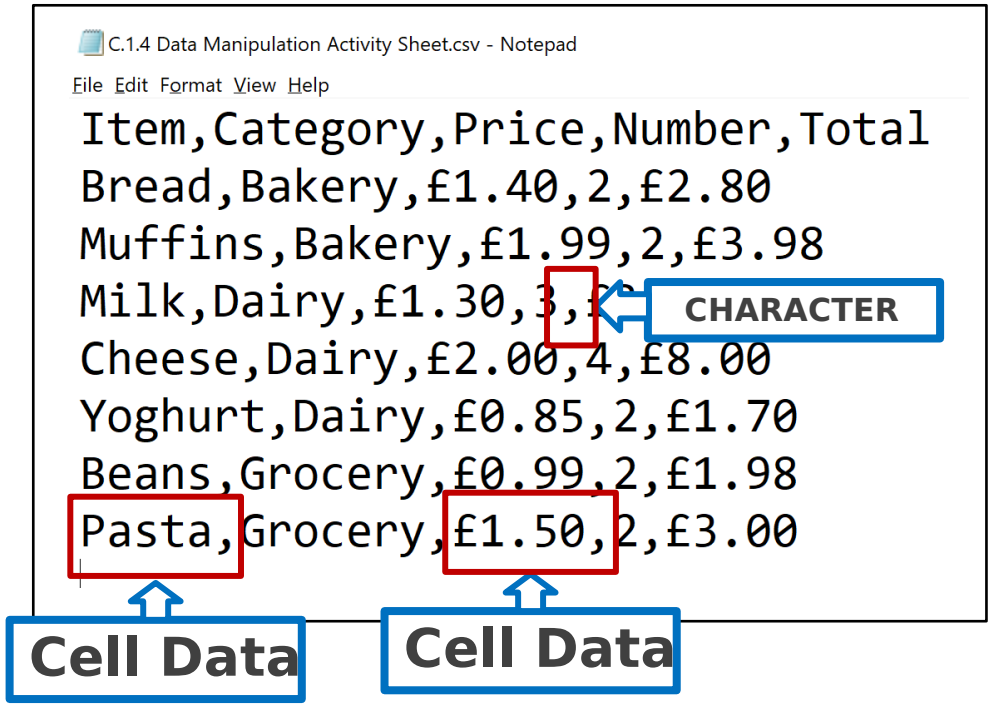
CSV FILE DATA IN EXCEL

Item	Category	Price	Number	Total
Bread	Bakery	£1.40	2	£2.80
Muffins	Bakery	£1.99	2	£3.98
Milk	Dairy	£1.30	3	£3.90
Cheese	Dairy	£2.00	4	£8.00
Yoghurt	Dairy	£0.85	2	£1.70
Beans	Grocery	£0.99	2	£1.98
Pasta	Grocery	£1.50	2	£3.00

Cell Data

Cell Data

CSV FILE DATA IN THE FILE



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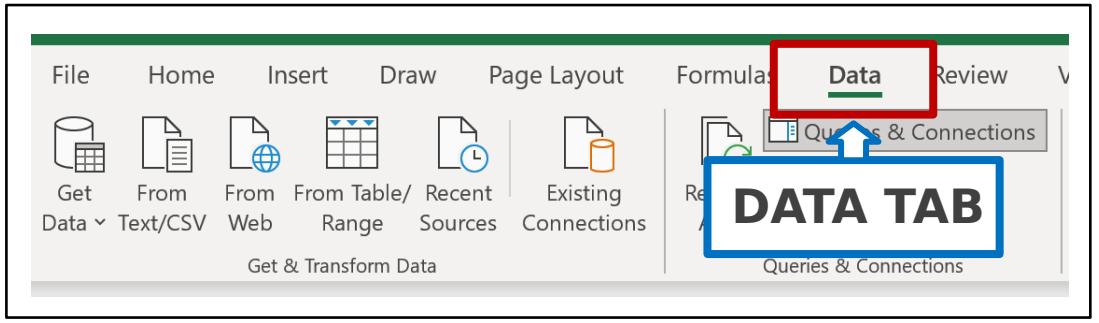
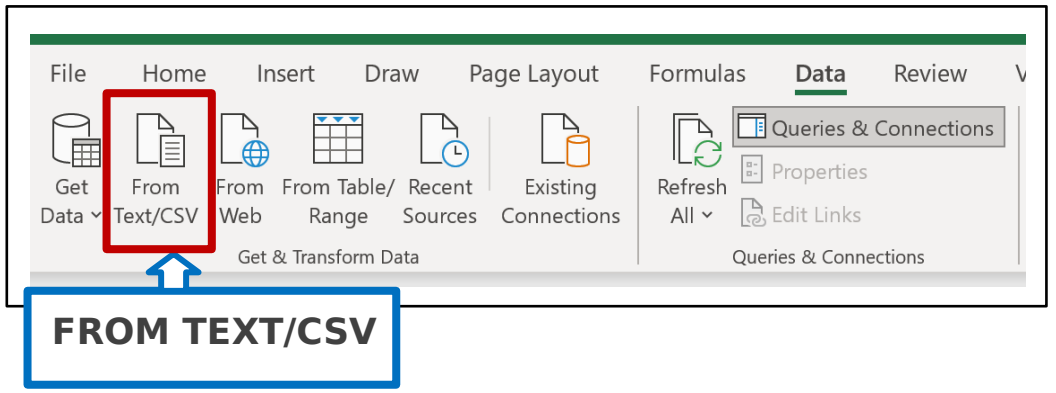
How To Import Data

GO INTO THE DATA TAB IN A BLANK WORKBOOK



SELECT FROM TEXT/ CSV



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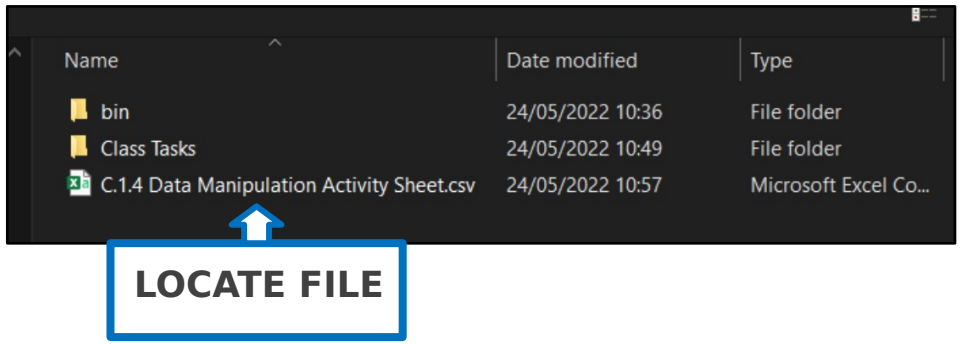
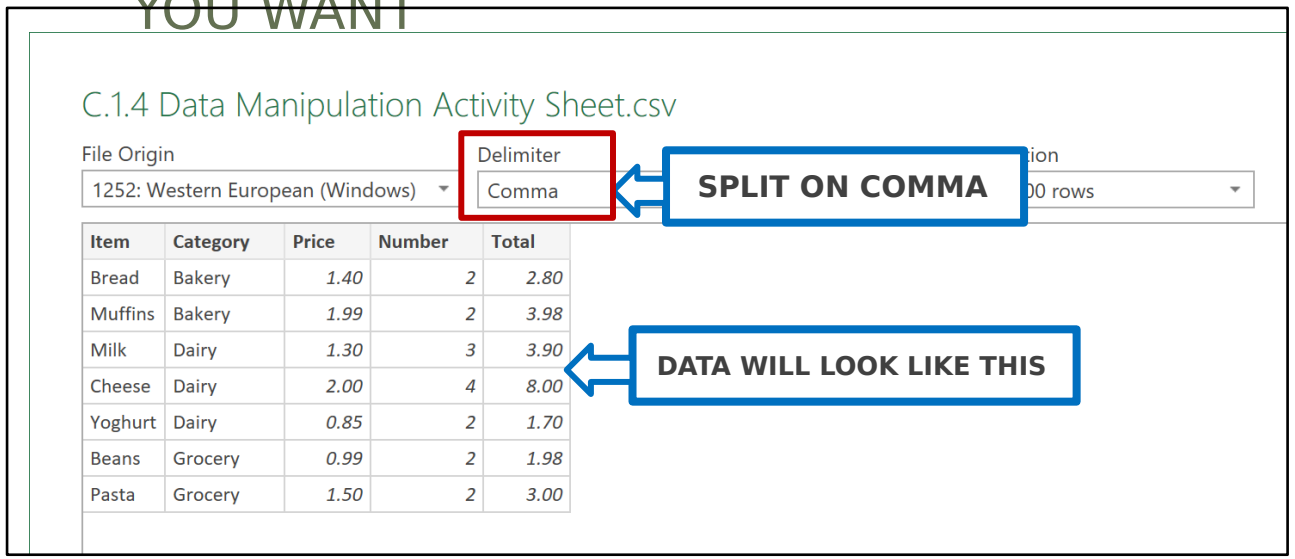
How To Import Data

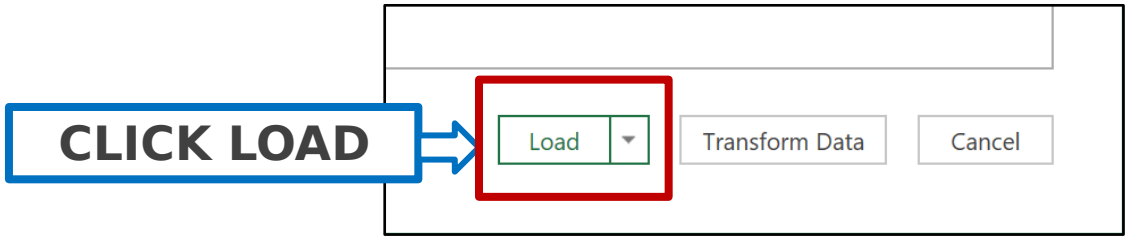
LOCATE AND OPEN THE FILE



CHECK THE DATA APPEARS HOW YOU WANT



Item	Category	Price	Number	Total
Bread	Bakery	1.40	2	2.80
Muffins	Bakery	1.99	2	3.98
Milk	Dairy	1.30	3	3.90
Cheese	Dairy	2.00	4	8.00
Yoghurt	Dairy	0.85	2	1.70
Beans	Grocery	0.99	2	1.98
Pasta	Grocery	1.50	2	3.00



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Your Data is Loaded With Some Basic Formatting Applied

Item	Category	Price	Number	Total
Bread	Bakery	1.4	2	2.8
Muffins	Bakery	1.99	2	3.98
Milk	Dairy	1.3	3	3.9
Cheese	Dairy	2	4	8
Yoghurt	Dairy	0.85	2	1.7
Beans	Grocery	0.99	2	1.98
Pasta	Grocery	1.5	2	3

FORMULA S MISSING

BASIC FORMATTING

DATA TYPE DETECTED

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Other Data Import Options

You can load data directly from web pages.

You can load data from other file formats such as XML.

You can establish a connection to a database and load table data into a spreadsheet.

This forms the basis of automated communication between systems.

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Class Activity – Data Import

- Using the Data Sets given to you.
- Create a blank workbook and import each .csv file into a separate worksheet.
- Configure the import routine to make sure data is loaded appropriately.
- What do you notice about the different import mechanisms?
- **TIME ALLOWED**: 10 minutes.

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Apply These To The Example Scenario

Are any of these data import and export techniques usable in your worked example scenario?

Modify your design documentation to include any extra functionality.

Add the code to your model.

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Spreadsheet Technique Checklist

Am I able to…			
Import data as a CSV file?		Export data as a CSV file?	

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Self-Check: Lesson Review

- Can I explain what is meant by data import?
- Can I explain what is meant by a CSV file?
- Can I load a CSV file correctly into an empty worksheet?
- Can I explain what is meant by data export?
- Can I export data correctly from my data model?

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Further Reading

Websites

Videos

Textbook: pp310 - 312

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